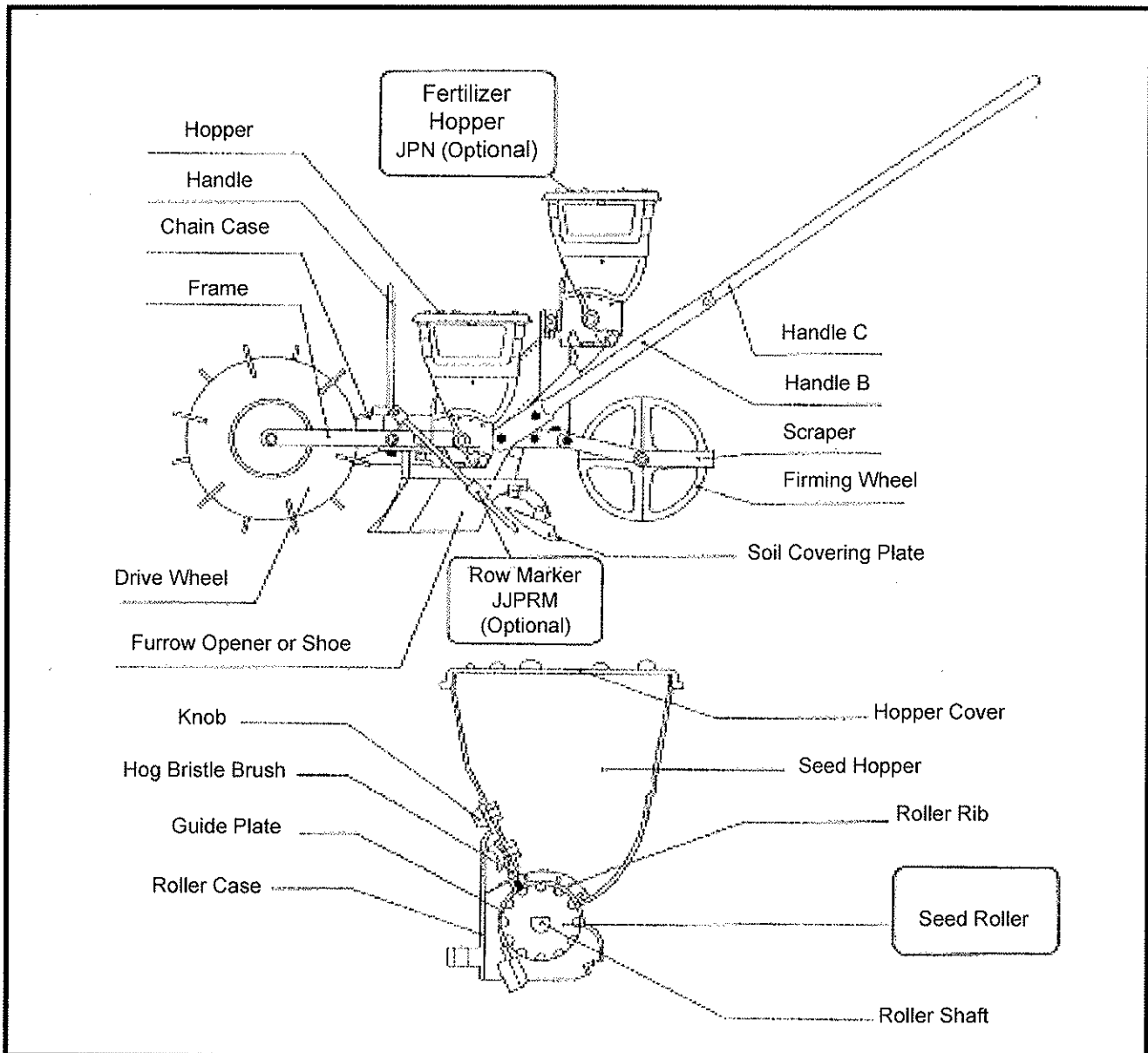


CLEAN SEEDER OPERATION MANUAL

MODEL JP-1

Please read this manual carefully before operating the seeder



distributed by: **Mechanical Transplanter Company, LLC**

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ADJUSTMENT

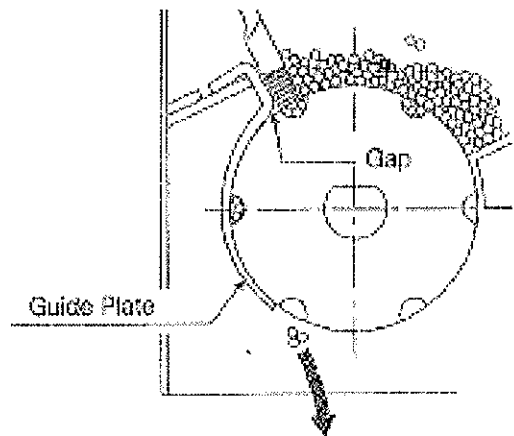
The brush should be lightly touching the seed roller. Raise the brush upward to allow more than one seed to process. For coated seeds, the brush should be lightly pressing the seeds. If the pressure is too strong the brush may quickly wear, if the brush is too loose, the coated seeds may break.

The guide plate requires an exact gap between the seed roller near the brush. Without this gap, the seeds may break. The tip of the guide plate should be in close contact with the seed roller.

In the event that the guide plate deforms, correct this according to the figure on the right. Remove the guide plate for line or spread on seeding. When using the optional spreading shoes, remove the guide plate.

Seed spacing can be adjusted with the chain gear combination and the number of seed holes in the seed roller. Refer to the spacing chart. Caution: Actual seed spacing may vary depending on soil quality and work speed. Check for correct spacing in the field when starting to seed.

Seed depth can be adjusted by raising or lowering shoe. Adjust soil covering plate angle to obtain optimal covering soil volume. Elevation of the handle can be readjusted by unscrewing the knob.



OPERATION

- * Lubricate all the rotating parts except Seed Rollers
- * The brush, guide plate, and wheel sponge are consumable parts. Check periodically and replace when appropriate
- * Ensure that seeding is uniform
- * Check if seed roller is clogged with waste, pesticide, or coating residue
- * Prepare a bed by careful clod breaking and leveling
- * Driving at excessive speeds may degrade work accuracy. Optimal speed: 20 in/second
- * Seeds should be dry whenever possible. Never wet coated seeds.
- * When seeding beans or corn, bridging may occur in the seed hopper so tap hopper lightly
- * Make sure that the roller clutch of the roller shaft is kept clean from soil etc...

HOPPER COVER



* The hopper cover is formed with specimen seed holes to keep track of the number of seeds per hole on the Seed Roller. The alphabetical letters represent roller size.

OPTIONAL PARTS

Plow: 2.36inch width	JSS2	Spreading Shoes for broadcast planting (Spinach, Barley, Welsh Onion, etc.)
Plow: 2.95inch width	JSS3	
Plow: 4.72inch width	JSS5	
Double Disc Shoe	JP-1000D	Fields with a lot of stubble, straw, grass etc.
Fertilizer Attachment	JP- N	Various powder type pesticides can be applied simultaneously
Row Marker	JJPRM	Convenient for controlling row spacing
Hopper Extension	JPEXT	Adds hopper capacity (0.53 gal)

SPACING CHART (inches)

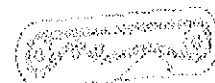
Spacing Chart for Series JPH Series											
* Spacings may change due to soil conditions											
Number of Teeth in Each Sprocket											
# of Holes in Seed Roll	Rear	14	14	13	13	11	11	10	11	10	9
	Front	9	10	10	11	10	11	11	13	13	14
3 Hole	20	18	18	15	14	12	11	11	9	9	8
4 Hole	14	13	12	11	10	9	9	8	7	7	6
6 Hole	10	9	8	7	7	6	5	5	5	4	4
12 Hole	5	4	4	3	3	3	2	2	2	2	2
24 Hole	2.5	2	2	1.5	1.5	1.5	1	1	1	1	0.5

* Shaded area shows inches between seeds

* Note

Spot intervals may vary depending on soil quality and moving speed. Check for correct intervals by testing in the field.

In certain chain gear combinations, chain tension may be too strong. If so, remove the Tension Spring. If chain is too loose, thread the chain as shown in the figure below.



JP SERIES ROLLER INFORMATION

Seed name & seeds of comparable size	Roller hole size
Arugula	YX
Basil	YYJ
Beans - Green	N
Beet	MJ
Beet - Large	LJ
Broccoli	Y
Cabbage	Y
Carrots	X
Cauliflower	Y
Cilantro	MJ
Collards	Y
Corn	A, AA, or N
Cotton	C
Cucumber	J
Kale	X
Lettuce - Coated	MJ
Lettuce - Raw	XY
Mustard	YX
Okra	LJ
Onion - Coated	MJ
Onion - Raw	X
Peas	Custom
Pepper	M
Radish	X
Spinach	F
Swiss Chard	LJ
Turnip	YYJ
Blank Roller	Z

Seed Rollers Available
A - 6
AA - 6
C - 6
C - 12
F - 12
F - 24
G - 6
G - 12
J - 2
J - 4
J - 8
L - 12
LJ - 12
M - 6
M - 12
MJ - 4
MJ - 6
MJ - 12
MJ - 24
MM - 12
MM - 24
N - 6
Q - 6
Q - 12
R - 12
R - 24
S - 4
U - 4
X - 4
X - 6
X - 12
X - 24
XY - 4
XY - 12
XY - 24
XYY - 12
XYY - 24
Y - 4
Y - 6
Y - 12
Y - 24
YX - 4
YX - 6
YX - 12
YYJ - 6
YYJ - 12
JJY - 24
Z - BLANK

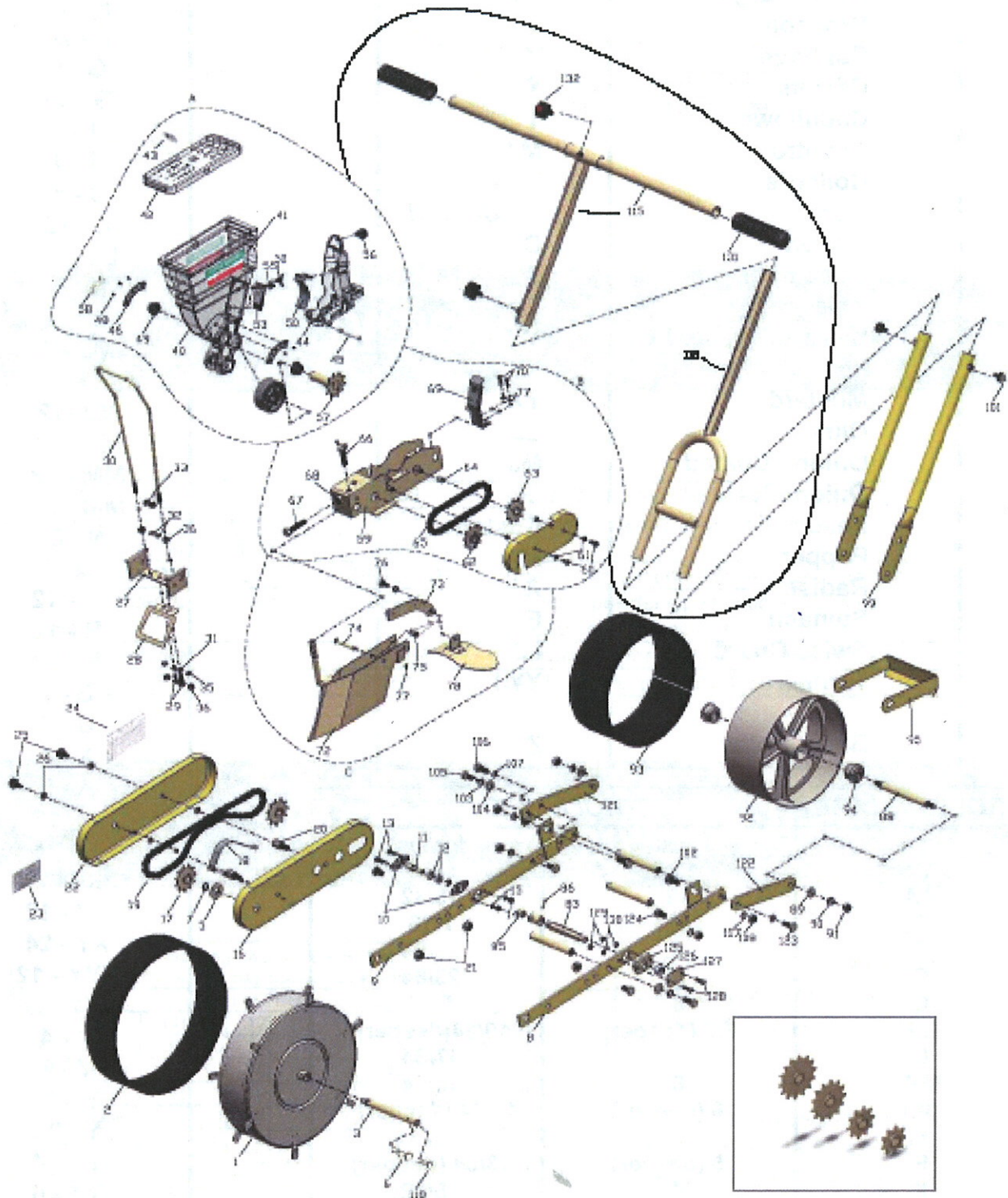
ROLLER NAME	HOLE SIZE	
	<i>mm</i>	<i>inches</i>
A	13.5	17/32
AA	12	15/32
C	11	7/16
R	9	23/64
G	9	23/64
Q	8	5/16
LJ	7.5 (deeper)	19/64(deeper)
L	7	17/64
MM	6	15/64
MJ	6 (deeper)	15/64 (deeper)
M	5	13/64
F	5 (deeper)	13/64 (deeper)
X	4	5/32
Y	3.5	9/64
YYJ	3	1/8
YX	2.5	7/64

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JP-1 PARTS



Sprocket Gear
(9,10,13,14T)

JP-1 PARTS LIST

Part #	Part Name
JJPA	Hopper Assembly
JJPB	Hopper Mtg.& Drive Assembly
JJPC	Shoe Assembly
JJP1	Drive Wheel
JJP2	Drive Wheel Rubber
JJP3	Drive Wheel Shaft
JJP5	Flat Washer M12
JJP6	Snap Pin 63L
JJP7	E-Ring
JJP8	Frame(L)
JJP9	Frame (R)
JJP10	Bearing Case
JJP11	Clutch Shaft
JJP12	Bearing
JJP13	Bolt(+) M5 x 14
JJP14	Hex Nut M5
JJP15	Spring Washer M5
JJP16	Chain Cover
JJP17	Chain Gear 11T
JJP18	Chain Tension Spring
JJP19	Chain #410 x 50L
JJP20	Chain Cover Hex Nut 12x32L
JJP21	Flange Nut M8
JJP22	Chain Cover
JJP23	Profile Table
JJP24	Spacing Chart
JJP25	Knob M6 x 11L
JJP26	Flat Washer M6
JJP27	Scraper Stopper
JJP28	Drive Scraper
JJP29	Hex Bolt M6 x 12L
JJP30	Lift Handle
JJP31	Flat Washer M6 (JJP26)
JJP32	Spring Washer M6
JJP33	Hex Nut M6
JJP35	Spring Washer M6
JJP36	Hex Nut M6 (JJP33)
JJP40	Hopper
JJP41	CLEAN SEEDER Stickers
JJP42	Hopper Cover
JJP43	Spot Seeding Mark Sticker
JJP44	Hopper Case
JJP45	Hopper Case Shaft
JJP46	Roll Rib
JJP48	(+)Truss Bolt(SUS)M2 x 5
JJP49	Oilless Bushing
JJP50	Guide Plate
JJP51	Guide Plate Seed Protect Cover
JJP53	Brush
JJP54	Wing Bolt M5
JJP55	Flat Washer M5
JJP56	Knob M5
JJP57	Hopper Sprocket 10T
JJP58	Snap Pin 44L
JJP59	Hopper Block
JJP60	Hex Bolt M5
JJP61	Spring Washer M5(JJP15)
JJP62	Hex Sprocket 10T
JJP63	Idle Sprocket 10T

Part #	Part Name
JJP64	DU Bushing
JJP65	Chain
JJP66	Wing Bolt M6
JJP67	Hex Bolt M8
JJP68	Hex Nut M8 (JJP91)
JJP69	Grip
JJP70	Hex Bolt (SUS) M4
JJP71	Spring Washer (SUS) M4
JJP72	Shoe Less Wing
JJP73	Shoe Arm
JJP74	Shoe Head Pin
JJP75	Torsion Spring
JJP76	Sem's Bolt M8 x 20L
JJP77	Sem's Bolt M8 x 15L
JJP78	Soil Recovering Wing
JJP79	Guide Shaft(Front)
JJP80	Sem's Bolt M8 x 15L
JJP81	Plate Hexagon Head Bolt
JJP82	Guide Shaft(Back)
JJP83	Hex Shaft 12 x 94.5L
JJP84	Clutch Bearing Collar
JJP85	One Way Clutch Bearing
JJP86	Spring Pin
JJP88	Packing Wheel Shaft
JJP89	Flange Nut M8
JJP90	Spring Washer M8
JJP91	Hex Nut M8
JJP92	Packing Wheel
JJP93	Packing Wheel Rubber
JJP94	Packing Wheel Spacer
JJP95	Scraper
JJP99	Lower T-Handle Assembly
JJP101	Knob M6 x 11L
JJP102	Flange Bolt M8
JJP103	Spring Washer M8 (JJP90)
JJP104	Flat Washer M8
JJP105	Hex Nut M8(JJP91)
JJP106	Hex Bolt M8
JJP107	Spring Washer M8(JJP90)
JJP108	Hex Nut M8(JJP91)
JJP110	Sprocket 9T
JJP111	Sprocket 10T
JJP112	Sprocket 13T
JJP113	Sprocket 14T
JJP115	T-Handle Bar Assembly
JJP118	Snap Pin 37L
JJP121	Packing Wheel Arm(L)
JJP122	Packing Wheel Arm@
JJP123	Sem's Bolt M8 x 20L
JJP124	Sem's Bolt M8 x 15L
JJP125	Bracket
JJP126	DU Bushing
JJP127	Bracket Cover
JJP128	Round Head Cross-Bolt
JJP129	Hex Nut M5 (JJP14)
JJP130	Spring Washer M5 (JJP15)
JJP131	T-Handle Grip
JJP132	Cap Knob
JJP133	Hex Bolt M8